

S.N. 09/782,375

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Sub C. 17

1. (Currently amended): A light tube for illumination by a power supply circuit comprising:
a bulb portion,
a pair of end caps disposed at opposite ends of the bulb portion, and
a plurality of closely-spaced light emitting diodes disposed inside the bulb portion and extending between the opposite ends of the bulb portion, the light emitting diodes in electrical communication with the pair of end caps for illuminating in response to electrical current received from the power supply circuit; and wherein the plurality of light emitting diodes is mounted on at least one circuit board.

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2. (Re-presented): ~~The light tube of claim 1~~ A light tube for illumination by a power supply circuit comprising:
a bulb portion
a pair of end caps disposed at opposite ends of the bulb portion, wherein each of the pair of end caps is shaped to be coupled with a fluorescent light tube socket, and
a plurality of closely-spaced light emitting diodes disposed inside the bulb portion and extending between the opposite ends of the bulb portion, the light emitting diodes in electrical communication with the pair of end caps for illuminating in response to electrical current received from the power supply circuit.

3. (Previously amended): The light tube of claim 2 wherein each of the pair of end caps is an electrical bi-pin connector.

4. (Original): The light tube of claim 1 wherein the bulb portion and the pair

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of end caps are dimensioned to be mounted in a fluorescent light tube socket.

5. (Previously amended): In a replacement light tube for a fluorescent light fixture having a light tube socket and a power supply circuit, the improvement comprising:
a plurality of closely-spaced light emitting diodes disposed inside a bulb portion of the light tube and in electrical communication with a pair of end caps coupled to opposed ends of the bulb portion and engageable with the light tube socket, the plurality of light emitting diodes operable to illuminate in response to electrical current delivered by the fluorescent light fixture.

6. (Previously amended): The improvement of claim 5 wherein the plurality of light emitting diodes is mounted to a circuit board.

7. (Previously amended): The improvement of claim 6 wherein each of the plurality of light emitting diodes is mounted at an angular off-set from the circuit board to establish a predetermined radiation pattern of light.

8. (Canceled).

9. (Currently amended): The light tube of claim 8 wherein the plurality of light emitting diodes is mounted on only one side of the at least one circuit board to emit light toward only one side of the bulb portion.

10. (Previously added): The light tube of claim 9 wherein the radiation pattern of light from each of the plurality of light emitting diodes is centered at a 90° angle relative to the at least one circuit board.

11. (Previously added): The light tube of claim 1 wherein each of the plurality of light emitting diodes is a white LED.

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12. (Previously added): The light tube of claim 1, wherein the plurality of light emitting diodes is displaced substantially continuously between the opposite ends of the bulb portion.

13. (Previously added): The light tube of claim 1 wherein each of the plurality of light emitting diodes is arranged into one of a plurality of equidistantly-spaced light emitting diode banks, each of the plurality of light emitting diode banks comprising at least two light emitting diodes.

14. (Previously added): The improvement of claim 5 wherein the bulb portion is annular.

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15. (Previously added): The improvement of claim 5 wherein the electric current is a direct current signal, the improvement further comprising:
a rectifier for converting an alternating current signal from the fluorescent light fixture to the direct current signal.

16. (Previously added): The improvement of claim 15, further comprising:
a pulse-width modulating circuit for receiving the direct current signal and supplying a resulting modulated signal to the plurality of light emitting diodes.

17. (Previously added): The improvement of claim 5 wherein each of the plurality of light emitting diodes is a white LED.

18. (Previously added): The improvement of claim 5 wherein each of the plurality of light emitting diodes is arranged into one of a plurality of equidistantly-spaced light emitting diode banks, each of the plurality of light emitting diode banks comprising at least two light emitting diodes.

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19. (Previously added): The improvement of claim 6 wherein the plurality of light emitting diodes is mounted on only one side of the circuit board to emit light toward only one side of the bulb portion.

20. (Previously added): The improvement of claim 19 wherein the radiation pattern of light from each of the plurality of light emitting diodes is centered at a 90° angle relative to the circuit board.

21. (New): The light tube of claim 1 wherein the bulb portion comprises one of clear glass and frosted glass.